

### Abstract

The invention relates to a novel use of neuroactive compounds by treating the fruitfly *Drosophila melanogaster* adult males with fly medium containing either of the neuroactive compounds strychnine, pentylenetetrazol, tetraethylammonium chloride, lithium carbonate and nicotine, crossing the drug treated males with untreated females to obtain progenies and self-crossing the progenies to obtain grand progenies, observing the locomotor behavior of the parents and their progenies and grand progenies in terms of height climbed in a negative geotaxis assay, wherein an altered height climbed by parents and their progenies and grand progenies, compared to those of normally fed males, demonstrates that the neuroactive compounds produce inheritable behavioral change.